

## MATERIAL SAFETY DATA SHEET

**SRM Supplier:** National Institute of Standards and Technology  
Standard Reference Materials Program  
Bldg. 202 Rm. 211  
Gaithersburg, Maryland 20899

**SRM Number:** 1882a  
**MSDS Number:** 1882a  
**SRM Name:** Calcium Aluminate Cement  
**Date of Issue:** 19 November 1999

**MSDS Coordinator:** Joylene W.L. Thomas  
**Phone:** (301) 975-6776  
**ChemTrec:** 1-800-424-9300

**FAX:** (301) 926-4751  
**E-mail:** SRMMSDS@nist.gov

---

### SECTION I. MATERIAL IDENTIFICATION

---

**Material Name:** Calcium Aluminate Cement

**Description:** SRM 1882a is a hydraulic binder with an alumina content of approximately 40 %. It is composed mainly of calcium aluminates and also contains other CaO, Al<sub>2</sub>O<sub>3</sub>, iron oxides and SiO<sub>2</sub> based compounds.

**Other Designations:** Hydraulic binder; fused calcium aluminate; alumina cement.

**Chemical Formula:** Primarily CaO·Al<sub>2</sub>O<sub>3</sub>

**CAS Registry Number:** 65997-16-2

**DOT Classification:** Not hazardous by DOT regulations.

**Manufacturer/ Supplier:** Available from a number of suppliers

---

### SECTION II. HAZARDOUS INGREDIENTS

---

Hazardous Components	Nominal Concentration (%)	Exposure Limits and Toxicity Data*
Fused Calcium Aluminate (as Nuisance Dust)	> 99	OSHA PEL-TWA: 5 mg/m <sup>3</sup> (respirable particulate) OSHA PEL-TWA: 15 mg/m <sup>3</sup> (total particulate) ACGIH TLV-TWA: 5 mg/m <sup>3</sup> (respirable particulate) ACIH TLV-TWA: 10 mg/m <sup>3</sup> (total particulate)

\*Limits set for the compound as a whole, **NOT** the individual components.

---

### SECTION III. PHYSICAL/CHEMICAL CHARACTERISTICS

---

<b>Appearance and Odor:</b> Brown, odorless powder
<b>Specific Gravity:</b> Approx 3.2 g/cm <sup>3</sup>
<b>Melting Point (Pyrometric Cone Equivalent):</b> 1270 °C
<b>Solubility in Water:</b> Negligible



---

## SECTION VII. PRECAUTIONS FOR SAFE HANDLING AND USE

---

**Steps to be Taken in Case Material is Released or Spilled:** Treat as a nuisance dust. Provide adequate ventilation. Cleanup personnel must be protected against dust inhalation. Avoid creating airborne dust conditions. Cleanup methods such as vacuuming (with an appropriate filter) or wet mopping minimizes dust dispersion. Carefully scoop up spilled dry material into a suitable container (with secure lid) for disposal or reclamation.

**Waste Disposal:** There are no special precautions. Follow all federal, state and local regulations.

**Handling and Storage:** Provide general and local ventilation systems to maintain airborne concentrations below the OSHA PEL and ACGIH TLV. Local exhaust ventilation is preferred since it prevents contaminant dispersion into the work area by controlling it at its source. Under conditions of frequent use or heavy exposure, a nuisance dust respirator may be needed. Wear chemical safety goggles, gloves, and other protective clothing to avoid contact with eyes and skin.

**NOTE:** Contact lenses pose a special problem; soft lenses may absorb irritants, and all lenses concentrate them. **DO NOT** wear contact lenses in the laboratory.

Store in tightly closed containers in a cool, dry, well-ventilated area. Protect containers from physical damage.

---

## SECTION VIII. SOURCE DATA/OTHER COMMENTS

---

**Sources:** Lafarge Calcium Aluminates, Inc., MSDS-08 FONDU, January 1, 1999.  
MDL Information Systems, Inc., MSDS *Cement, Alumina, Chemicals*, June 2, 1999.

**Disclaimer:** Physical and chemical data contained in this MSDS are provided for use in assessing the hazardous nature of the material. The MSDS was prepared carefully, using current references; however, NIST does not certify the data on the MSDS. The certified values for this material are given only on the NIST Certificate of Analysis.